

REMARKS

After the foregoing amendment, claims 1-14 are pending in the application.

Applicants respectfully request additional consideration and review of the claims in view of the foregoing amendment and the following remarks.

Rejections Under 35 U.S.C. § 102(e)

The Examiner has rejected claims 1-4 and 6-14 under 35 U.S.C. §102(e) as being anticipated by Inoue (U.S. 6,510,153 B1). Applicants respectfully traverse this rejection.

A purpose of Applicants' claimed invention is to provide a method in which a mobile host can dynamically obtain a home address when powering up in a foreign network. An important aspect of Applicants' claimed invention is to create a temporary tunnel between the mobile host and the home network that allows a permanent home address to be communicated from the home network to the mobile host. This aspect of Applicants' claimed invention is included, for example, in the portion of independent claim 1 that calls for "*creating a bootstrapping agent that works cooperatively with a M-IP home agent to allocate a temporary home address ... using said temporary home address to create a temporary tunnel ... wherein said temporary tunnel is used to communicate configuration information including a permanent home address ...*". See, for example, page 3, lines 27-30 and page 4, lines 1-5 in Applicants' specification where this aspect of the invention is discussed.

The system described in the Inoue reference, like Applicants' claimed invention, is generally concerned with the allocation of home addresses using DHCP while in a foreign network. Inoue provides a mobile computer management device for managing moving location information for a mobile computer, which is capable of carrying out communications while moving among interconnected networks. However, there are significant differences in Applicants' claimed invention and Inoue.

First, in Applicants' claimed invention each mobile host is responsible for maintaining its individual DHCP proxy clients, initiating communications and communicating directly with the home agent to obtain a permanent address and configuration information. This aspect is pointed out in Applicants' claim 1 limitation that calls for "creating a bootstrapping agent that works cooperatively with a M-IP home agent to allocate a temporary home address ... using said temporary home address to create a temporary tunnel between a foreign agent associated with said portable and/or mobile host and said M-IP home agent, wherein said temporary tunnel is used to communicate configuration information including a permanent home address allocated by the DHCP protocol for said portable and/or mobile host to connect to the Internet". Applicants' FIG. 3 provides the details of the messages between the mobile host and the home agent. Although having the mobile host maintain individual DHCP proxy clients incurs a slight overhead in startup latency and the need to setup/teardown transient tunnels, it relieves the home agent of this burden, allowing the home agent to scale in terms of performance.

Contrary to Applicants' claimed invention, in the system described by Inoue, the home agent is a "mobile computer management device" sitting inside the home network which acts as the DHCP proxy on behalf of the mobile host, as shown in Figure 5. After the mobile host requests registration of the Q-bit, the home agent initiates communications and communicates with the DHCP server to request and obtain permanent address and configuration information, as shown in FIG. 8. Thus, the cost of maintaining the DHCP session is imposed on the home agent, rather than on the mobile host as in Applicants' claimed invention. Therefore Inoue does not teach Applicants' claim 1 limitation calling for "creating a bootstrapping agent that works cooperatively with a M-IP home agent to allocate a temporary home address ... using said temporary home address to create a temporary tunnel between a foreign agent associated with said portable and/or mobile host and said M-IP home agent, wherein said temporary tunnel is used to communicate configuration information including a permanent home

address allocated by the DHCP protocol for said portable and/or mobile host to connect to the Internet".

Second, the Examiner asserts that Applicants' claim 1 reads on Inoue's Figures 4-7. Applicants disagree. Applicants' claim 1 calls for "a bootstrapping agent that works cooperatively with a M-IP home agent to allocate a temporary home address". In Inoue, the home agent is a "mobile computer management device" sitting inside the home network, as shown in Figures 4 and 5. Inoue's Figures 4-7 do not show a bootstrapping agent that works cooperatively with a M-IP home agent (i.e., mobile computer management device) to allocate a temporary home address as in Applicants' claim 1.

Third, a direct result of the above-mentioned design difference is the impact on standards compliance. Applicants' claimed invention relies on the use of a DHCP client on the mobile host itself, as recited in Applicants' dependent claim 7, and which is a significant advantage. The home agent is unaware of the use of the DHCP application itself (i.e., the home agent is aware of the transient tunnel, but does not know or care that this tunnel is used for DHCP purposes). Thus, Applicants' claimed invention could be deployed today with home agent equipment manufactured by any standards compliant manufacturer.

Contrary to Applicants' claimed invention, Inoue teaches the use of a new functionality in the home agent that requires a modification to the Mobile IP standard. For example, Figures 8, 9, 10, and 12 in Inoue show the use of a new "Q" bit that is not part of the standard. A Q-bit is a flag for indicating whether the acquired DHCP address is to be used at the home network or not, as stated in column 16, lines 18-19. As known by those skilled in the art, the Internet Engineering Task Force is responsible for setting Internet standards and all equipment manufacturers adhere to these standards. None of the Mobile IP related standards (e.g., RFC 3220, RFC 2290, RFC 2002) allow or recognize such a "Q" bit registration. Thus, it is not possible to deploy the invention taught by Inoue using standard home agent equipment. These distinctions are sufficient to distinguish Applicants' claim 1 from Inoue.

Inoue does not teach the limitations recited in Applicants' independent claim 1 for the above-mentioned reasons. Since claims 2-4 and 6-8 depend from claim 1, these dependent claims are therefore also believed to be allowable for the same reasons set forth above for independent claim 1. Therefore, Inoue does not embody Applicants' claims 2-4 and 6-8.

Independent claims 9, 10, 12, 13, and 14 have limitations similar to that in independent claim 1. Inoue does not teach those limitations for the above-mentioned reasons. Since claim 11 depends from claim 10, this dependent claim is therefore also believed to be allowable for the same reasons set forth above for independent claim 1. Therefore Inoue does not embody Applicants' claims 9-14.

In view of the foregoing, Applicants respectfully request that the rejection under 35 USC §102(e) be withdrawn.

Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Inoue (U.S. 6,510,153 B1).

With respect to claim 5, Inoue does not anticipate the limitations recited in Applicants' independent claim 1 for the above-mentioned reasons. Since claim 5 ultimately depends from independent claim 1 which has previously been shown to be allowable, it is therefore also believed to be allowable for the same reasons set forth above for the respective independent claim 1.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 5.

Claim Amendment

Claims 5 and 14 have been amended to more clearly and particularly point out that which Applicants regard as the invention and to improve their form generally.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that claims 1-14 are in condition for allowance, and reconsideration is therefore respectfully requested. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is invited to contact the undersigned to resolve the issues.

Respectfully submitted,
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Atts.

I hereby certify that this correspondence is being deposited in the United States Postal Service as first class mail in an envelope with sufficient postage addressed to: Mail Stop NO-FEE AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on APRIL 21, 2004

Sharon L. Lobosco Date 4/21/04
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